Please add new claims 35 and 36.

35 . The method according to claim 31, wherein the stirring is conducted between 1-50 rpm.

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36 . The method according to claim 32, wherein the stirring is conducted between 1-50 rpm.

REMARKS

In the February 3, 2003 Response, new claims 31-34, were presented which erroneously recite the invention. In addition, some arguments were presented in the Remarks which are not accurate in light of the specification. This is discussed below.

Through a misunderstanding, the Remarks in the February 3, 2003 Response inadvertently state that the stirring step during the fermentation process resulted in the separation of curd and whey. This is not correct. In fact, the stirring generates curd pieces and whey. This enables easier separation of the curd pieces and whey during the ultimate step of the process (the centrifugation or filter processing step). The stirring step is conducted so that curd pieces, and not a continuous curd mass, and whey are generated. In other words, the phrase "so that curd pieces and whey are generated" is a functional phrase that defines the manner and intensity of the stirring. The stirring speed and intensity must be sufficient so that curd pieces and whey are generated, but must not be so vigorous that the bacteria (facultative anaerobes) are inhibited by the presence of too much oxygen (resulting from stirring). See the specification at page 12, lines

8-10, which indicates that the stirring step must be conducted so that:

> "...a single curd bulk in the form of a contiguous gel is *not* generated, but the curd pieces float, disperse, or precipitate in the whey."

Page 11, lines 5-7 of the February 3, 2003 Response set forth that "By stirring during fermentation, whey is generated that contains a remarkable high yield of ACE inhibitory peptides..." This statement is inaccurate. According to the specification, the stirring during fermentation provides fermented milk that contains ACE inhibitory peptides at the same ratio or higher than the one produced by static fermentation (see specification at page 13, lines 13-17).

The result of stirring during fermentation is that the yield of whey from the fermented milk is remarkably improved, which results in a remarkably high yield of the ACE inhibitory peptides. The content of the peptide in a unit amount of whey is not necessarily increased from the prior art methods of static fermentation, but more whey is produced which leads to more peptides that can be recovered from the whey.

This is demonstrated in Comparative Example 2 and Example 2, wherein the peptide content per 100 g of fermented milk is similar (10.5 and 10.8) in both examples. However, the difference is in the amount of whey produced: 100 g by static fermentation (*i.e.*, the prior art method) and 6.4 kg by the method of the present invention which employs stirring during fermentation. Accordingly, more ACE inhibitory peptides will be recovered from the whey.

In Comparative Example 2, the stirring was conducted after the fermentation (see specification at page 19, lines 13-14), to break the curd into pieces and lower the viscosity of the contiguous curd to facilitate separation of whey. Despite this operation, only a small amount of whey was recovered compared to Example 2, since the timing of stirring was not in accordance with the present invention. This means that stirring after fermentation does not improve whey recovery.

In addition, by conducting the stirring in a manner so that curd pieces and whey are generated, the separation of the whey from the curd is facilitated. Simple procedures for separation, such as centrifugation or filter pressing, may be employed instead of the usual burdensome and expensive methods of separation.

Despite some erroneous assertions in the Remarks of the February 3, 2003, Response, the methods recited in the present claims are not anticipated by or obvious over the cited prior art of record, namely published European Patent Application EP 583 074 ("the EP application"), an abstract to Nakamura et al. ("the Nakamura abstract"), and commonly owned U.S. Patents 5,766,940 to Yamamoto et al. ("the 940 patent"), and 5,695,796 to Yamamoto et al. ("the '796 patent") and 5,541,11 to Yamamoto et al.

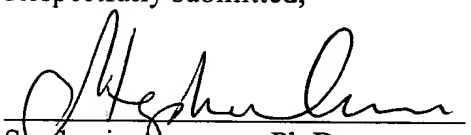
None of these references teach or suggest stirring during fermentation, much less that stirring during fermentation will increase the yield of whey, which contains ACE inhibitory peptides.

Accordingly, withdrawal of the 35 U.S.C. §102 and §103 rejections is respectfully requested.

In view of the above amendments and remarks, the subsisting claims are believed to be in condition for allowance and such action is respectfully requested.

If there are any other issues remaining which the Examiner believes could be resolved through either a second Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Shuji KITAMURA; Takashi UEYAMA

Serial No.: 09/889,313 Art Unit: 1651

Confirmation No.: 2308

Filed: July 11, 2001 Examiner: M. Meller

For: PROCESS FOR PRODUCING FERMENTED MILK CONTAINING ANGIOTENSIN CONVERTING ENZYME INHIBITORY PEPTIDE AND PROCESS FOR PRODUCING MILK SERUM

MARK-UP FOR SUPPLEMENTAL AMENDMENT DATED FEBRUARY 3, 2003

February 18, 2003

Hon. Commissioner of
Patents and Trademarks
Washington, DC 20231

EXPRESS MAIL CERTIFICATE EV 294033884 US
Date 2/18/03 Label No.
I hereby certify that on the date indicated above, this paper or fee was deposited with the U.S. Postal Service & that it was addressed for delivery to the Assistant Commissioner for Patents, Washington, DC 20231 by "Express Mail Post Office to Addressee" service.
D. DAVIS
Name (Print)
D Davis
Signature

Sir:

IN THE CLAIMS

9. (Thrice Amended) A method for producing whey containing an angiotensin converting enzyme inhibitory peptide comprising:

(i) mixing lactic acid bacteria and a starting material containing milk by stirring to prepare a mixed material;

(ii) fermenting said mixed material while stirring so that curd pieces and whey containing an angiotensin converting enzyme inhibitory peptide are generated,

whereby fermented milk containing said curd pieces and said whey containing the angiotensin converting enzyme inhibitory peptide is produced; and

(iii) subjecting the fermented milk to at least one of centrifugation and filter [processing] pressing to separate and recover whey.

18. (Twice amended) A method for producing whey containing an angiotensin converting enzyme inhibitory peptide comprising:

(i) mixing lactic acid bacteria and a starting material containing [material containing] milk by stirring to prepare a mixed material;

(ii) fermenting said mixed material while stirring so that curd pieces and whey containing an angiotensin converting enzyme inhibitory peptide are generated,

(iii) fermenting said mixed material under static conditions,

whereby fermented milk containing said curd pieces and said whey containing the angiotensin converting enzyme inhibitory peptide is produced; and

(iv) subjecting the fermented milk to at least one of centrifugation and filter pressing to separate and recover whey.

31. A method for producing whey containing an angiotensin converting enzyme inhibitory peptide comprising:

(i) preparing a mixture of lactic acid bacteria and a starting material containing milk;

(ii) fermenting said mixture while stirring [to generate curd pieces and whey] so that curd pieces and whey are generated; and

(iii) recovering whey from said mixture after said fermentation.

32. A method for producing whey containing an angiotensin converting enzyme inhibitory peptide comprising:

(i) preparing a mixture of lactic acid bacteria and a starting material containing milk;

(ii) fermenting said mixture while stirring [to generate curd pieces and whey] so that curd pieces and whey are generated;

(iii) fermenting said mixture under static conditions[,] ; and

(iv) recovering whey from said mixture after said fermentation.

33. The method according to claim 31, wherein recovering whey in step (iii) is by at least one of centrifugation and filter [processing] pressing.

34. The method according to claim 32, wherein recovering whey in step [(iii)] (iv) is by at least one of centrifugation and filter [processing] pressing.